

THREE NEW RECORD GENERA AND THREE NEW SPECIES OF ERIGONINAE FROM CHINA (ARANEAE, LINYPHIIDAE)

SONG Yan-Jing LI Shu-Qiang*

Institute of Zoology, Chinese Academy of Sciences, Beijing 100101, China

Abstract Three genera *Diplocephaloides* Oj 1960, *Gongylidium* Menge 1868 and *Oia* Wunderlich 1973 are reported from China for the first time with description of three new species *Diplocephaloides uncutus* sp. nov., *Gongylidium rugulosa* sp. nov. and *Oia breviprocessa* sp. nov.

Key words Intraspecific variation, male palp, epigynum.

1 Introduction

The genus *Diplocephaloides* Oj 1960 is a monotypic genus known from Korea and Japan. Recent collections from Zhejiang, China in Oct. 2006 yielded the second species.

The genus *Gongylidium* Menge 1868 includes four species (Platnick 2010): *G. baltoni* Caporacci 1935 from Karakorum, *G. gebhardti* Kobsavary 1934 from Hungary, *G. rufipes* (Linnaeus 1758) with Palearctic distribution and *G. soror* Thaler 1993 from Italy. A new species *G. rugulosa* sp. nov. was collected from Tibet, China.

The genus *Oia* Wunderlich 1973 was established for *O. inadati* (Oj 1964) from Russia, Korea, Japan and the type species *O. soror* Wunderlich 1973 from Nepal. During further study of *Oia* materials from Henan Province, a new species *O. breviprocessa* sp. nov. was discovered.

As a result, a total of 71 genera and 127 erigonine species are known from China (Platnick 2010).

2 Material and Methods

Specimens were examined using an Olympus SZ11 stereomicroscope and illustrated using an Olympus BX41 compound microscope equipped with a drawing tube. Left male palps and female epigyna were illustrated after being separated from the body. Embolic divisions were dissected from the palpal bulb using sharp pins and forceps. Genital organs were immersed in 75% alcohol and examined under a compound microscope; embolic divisions and vulvae were mounted in Hoyer's Solution and examined in strong transmitted light against a white background. In addition, the ventral tegument of epigyna was removed by sharp pins and forceps to study the duct system of the vulvae under a microscope.

Eye diameters were measured at their widest extent. Leg measurements are given as total length (femur, patella, tibia, metatarsus, tarsus). All measurements are in millimeters. Terminology of genitalic structures follows Homiga (2000) and Tanasevitch (2006).

The following abbreviations are used in the text and figs.

Somatic morphology. ALE, anterior lateral eye; AME, anterior median eye; PLE, posterior lateral eye; PME, posteriormedian eye; Tm I, position of the first metatarsal trichobothrium; Tm IV, position of the fourth metatarsal trichobothrium.

Male palp. C, column; DSA, distal suprategular apophysis; E, embolus; H, haematodocha; MM, median membrane; MSA, marginal suprategular apophysis; L, lamella; PC, paracymbium; PRP, posterior radical process; PT, protégulum; R, radix; SPT, suprategulum; ST, subtegulum; T, tegulum; TS, tegular sac; TP, tailpiece of radix.

Epigynum. CD, copulatory duct; CO, copulatory opening; DP, dorsal plate; FD, fertilization duct; FO, fertilization opening; S, spermatheca; VP, ventral plate.

Specimens studied in the current paper are deposited in the Institute of Zoology, Chinese Academy of Sciences (ZCAS).

3 Taxonomy

Diplocephaloides uncutus sp. nov. (Figs 1–17)

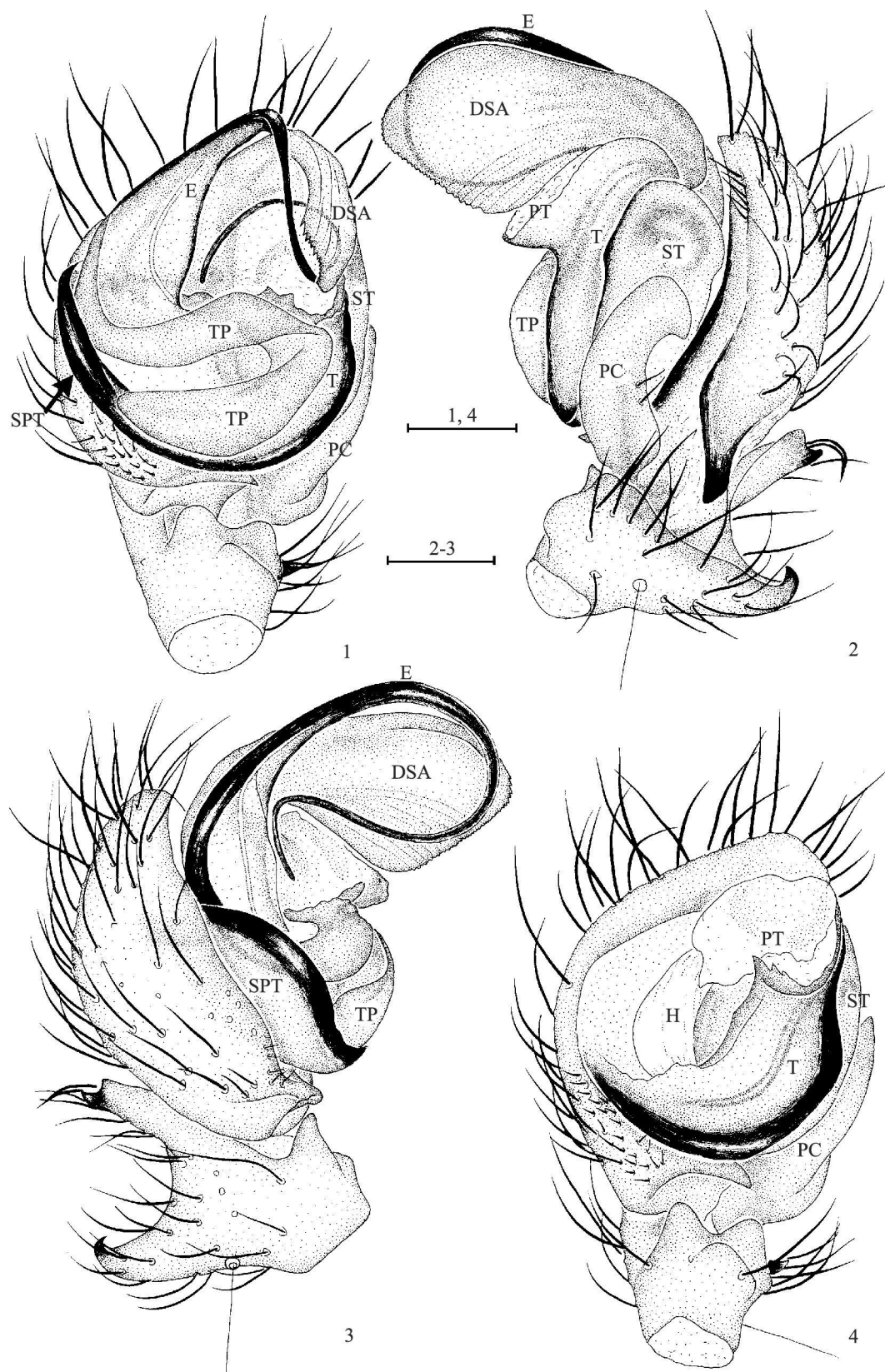
Type material. Holotype male (ZCAS), Mt Long'ao (29.65°N, 121.40°E), Shangsong Village, Fenghua City, Zhejiang Province, China, SONG Yu-Ding and YN Xiu-Ping 15 Oct. 2006. Paratypes 6 males and 6 females (ZCAS), same data as holotype.

Diagnosis The new species is similar to *Diplocephaloides*

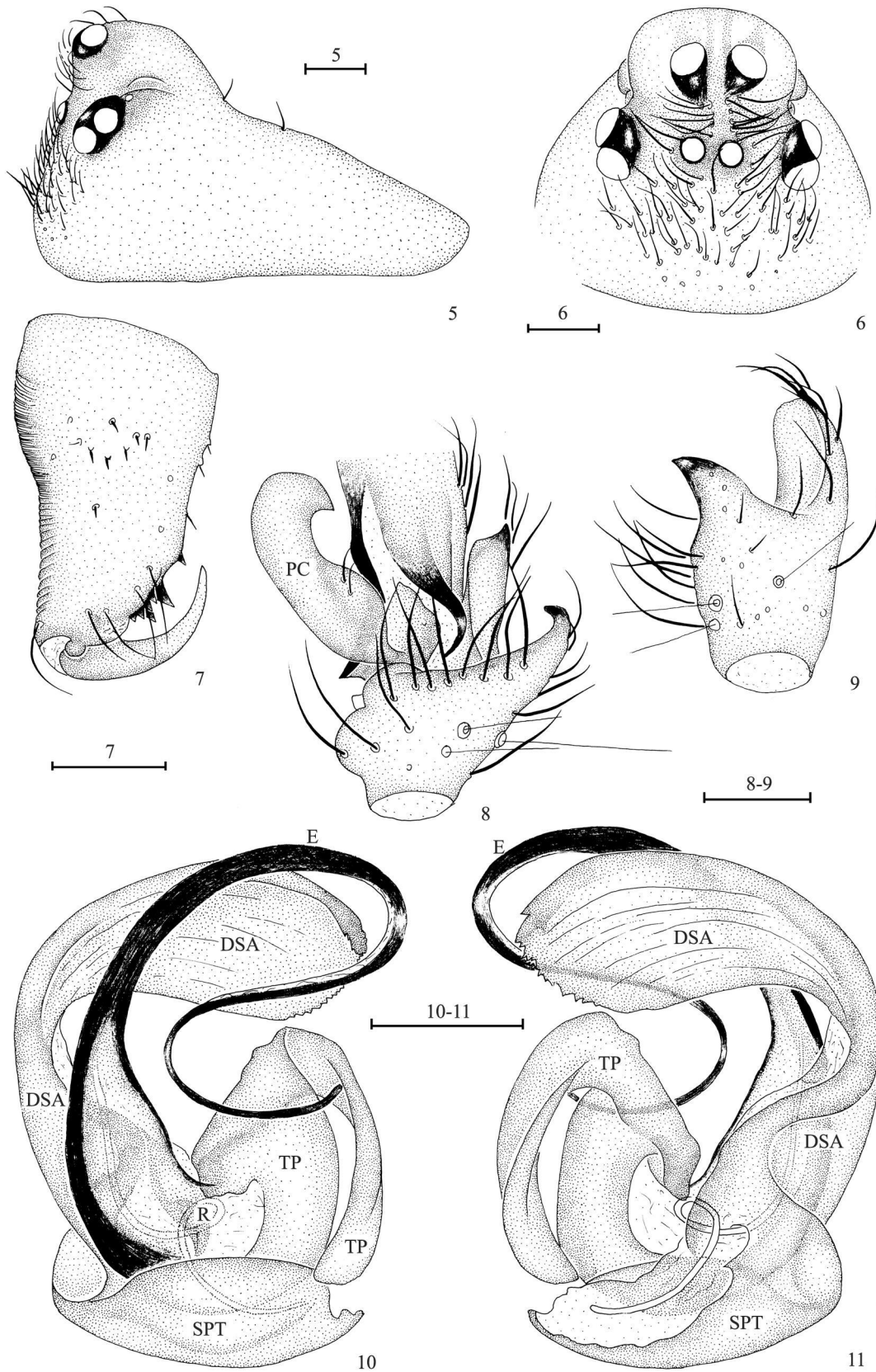
This study was supported by the Ministry of Science and Technology of the People's Republic of China (2006FY120100/2006FY110500).

* Corresponding author. E-mail: liq@ioz.ac.cn

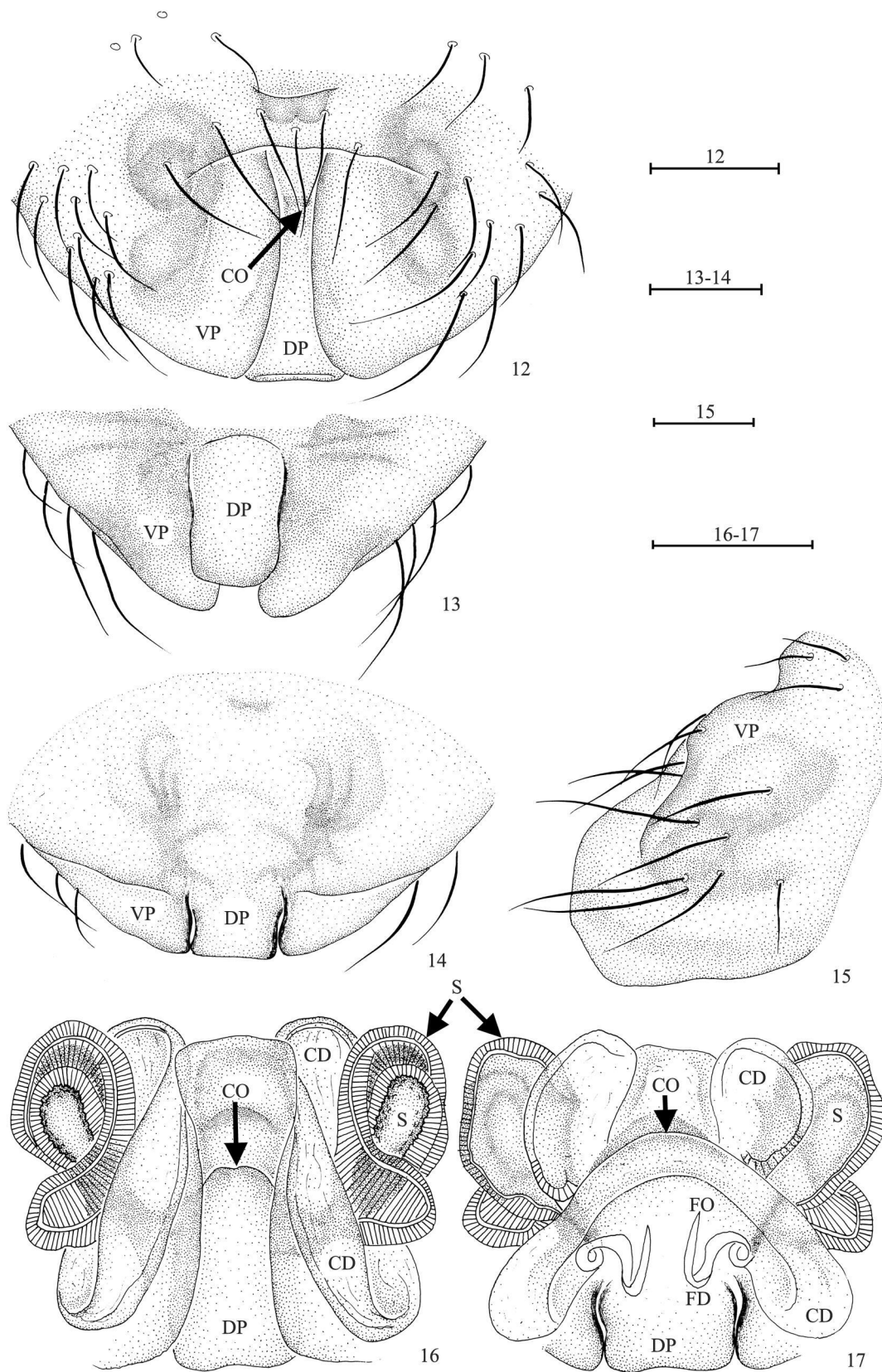
Received 20 June 2010, accepted 1 Sep 2010



Figs 1 - 4. *Diplocophaloides unatus* sp. nov. 1. Left male palp, ventral view. 2. Same, retrolateral view. 3. Same, prolateral view. 4. Left male palp (embolic division removed). Drawings based on holotype. Scale bars = 0.1 mm.



Figs 5– 11. *Diplocephalus unatus* sp. nov. 5 Male carapace lateral view. 6 Same male carapace frontal view. 7. Left male chelicera posterior view. 8. Base of left male palpus retro-lateral view. 9. Tibia of left male palpus dorsal view. 10. Embolic division ventral view. 11. Same embolic division dorsal view. Drawings based on holotype. Scale bars = 0.1 mm.



Figs 12 – 17. *Dplocephaloiles unatus* sp. nov. 12. Epigynum, ventral view. 13. Same, posterior view. 14. Same, dorsal view. 15. Same, lateral view. 16. Female vulva, ventral view. 17. Same, dorsal view. Drawings based on paratype. Scale bars = 0.1 mm.

saganus (Bösenberg & Strand, 1906), but male can be easily distinguished by the shape of tibial apophysis that is large, hooked, extended from the dorso-lateral margin (Fig. 8), but small, thin, straight in *D. saganus*; female can be distinguished by the presence of a small brownish w-shaped projection at the anterior part of the epigynum, without such a projection in *D. saganus*.

Description of holotype. Total length 1.75. Carapace 0.92 long, 0.72 wide, reddish-orange, bearing a large cephalic lobe with PME on the top; short, nearly parallel sulci present behind PME (Fig. 5); two rows of hairs directed oppositely to the lateral sides, orderly arranged between PME and AME; a patch of hairs sparsely distributed in a rounded area in central clypeus (Fig. 6). Clypeus 0.24 high. Abdomen light grey. AME diameter 0.04, ALE 0.07, PME 0.07, PLE 0.07, AME-AME 0.50 times their diameter, AME-ALE 0.90 times ALE diameter, PME-PME 0.59 times their diameter, PME-PL 1.45 times PLE diameter. Sternum 0.44 long, 0.50 wide. Coxa IV interdistance 1.58 times their width. Chelicera with 3 promarginal and 4 retromarginal teeth (Fig. 7). Tibia of leg I 11.36 times longer than its deep. Tm I 0.93, Tm IV present. Dorsal spines on legs I – IV: tibiae 2-2-1-1, thin and short; patellae 2-2-2-2. Leg measurements: I 2.98 (0.81, 0.22, 0.78, 0.78, 0.39); II 2.92 (0.81, 0.21, 0.78, 0.75, 0.38); III 2.24 (0.63, 0.21, 0.52, 0.58, 0.31); IV 3.01 (0.81, 0.21, 0.81, 0.78, 0.41).

Palp. Femur cylindrical, twice the patellar length. Tibia (Fig. 2) short, the dorso-mesial margin extended into a large rectangular apophysis with a pointed tip; the dorso-ectal margin armed with a hooked apophysis with 1 prolateral and 2 retrolateral trichobothria (Fig. 9). Paracymbium large, rectangular basally, slightly curved, hooked distally, bearing two short hairs medially (Fig. 8). Cymbium brownish black proximally, broadly concaved on the inner lateral margin (Fig. 2). Tegulum mesal to subtegulum in unexpanded palp (Fig. 2). Protegulum more or less rounded, slightly concaved in the center after the embolic division was dissected from the palp (Fig. 4). Suprattegulum armed with a deep retrolateral groove and a large lamellar distal apophysis, which is narrow proximally but widened sharply until the serrated anterior margin, with outer surface covered with conspicuous long wrinkles (Figs 10 – 11). Embolus long, coiled, wide proximally, with a narrow membrane along the inner margin (Fig. 10). Tarpiece large, reverse C-shaped, covering most part of tegulum in ventral view (Fig. 1).

Description of female (paratype). Total length 2.06. Carapace 0.69 long, 0.63 wide, unmodified, similar to that of male in coloration. Clypeus 0.17

high. AME diameter 0.05, ALE 0.07, PME 0.07, PLE 0.06, AME-AME 0.44 times their diameter, AME-ALE 0.52 times ALE diameter, PME-PME 0.52 times their diameter, PME-PL 0.63 times PLE diameter. Sternum 0.41 long, 0.48 wide. Coxa IV separated by 1.95 times their width. Chelicera with 3 promarginal and 5 retromarginal teeth. Tibia of leg I 7.85 times longer than its deep. Tm I 0.93, Tm IV present. Dorsal spines on legs I – IV: tibiae 2-2-1-1; patellae 2-2-2-2. Leg measurements: I 2.44 (0.70, 0.21, 0.64, 0.59, 0.29); II 2.38 (0.69, 0.21, 0.59, 0.59, 0.30); III 1.96 (0.56, 0.21, 0.44, 0.49, 0.26); IV 2.57 (0.73, 0.21, 0.66, 0.66, 0.31).

Epigynum prominent in lateral view (Fig. 15), with a wide fissure medially and a brownish w-shaped projection anteriorly (Fig. 12). Dorsal plate partially covered by the ventral plate, trapezoidal-shaped in ventral view and rectangular-shaped in posterior (Fig. 13) or dorsal view (Fig. 14). Copulatory openings present at the anterior margin of the dorsal plate. Copulatory ducts enclosed in a complicated capsule (Figs 16–17). Spermathecae 2 pairs (Fig. 16). One pair is flat, large, S-shaped. The other pair is small, ellipsoidal, partly fused with S-shaped spermathecae in the center. Fertilization ducts mesally originated but directed anteriorly (Fig. 17).

Etymology. The specific name is from Latin adjective “*unatus*” = “hooked”, and refers to the shape of the palpal tibial apophysis, which extends from the dorso-lateral margin.

Variation. 7 males and 6 females were measured. Total length varies from 1.55–1.95 in males, 1.59–2.06 in females. Carapace length is 0.66–0.92 in males, 0.66–0.69 in females, width 0.61–0.72 in males, 0.55–0.63 in females.

Distribution. Mt Long’ao in Zhejiang Province.

Habitat. The spiders were found under decayed leaves on the ground in evergreen broad-leaved forest.

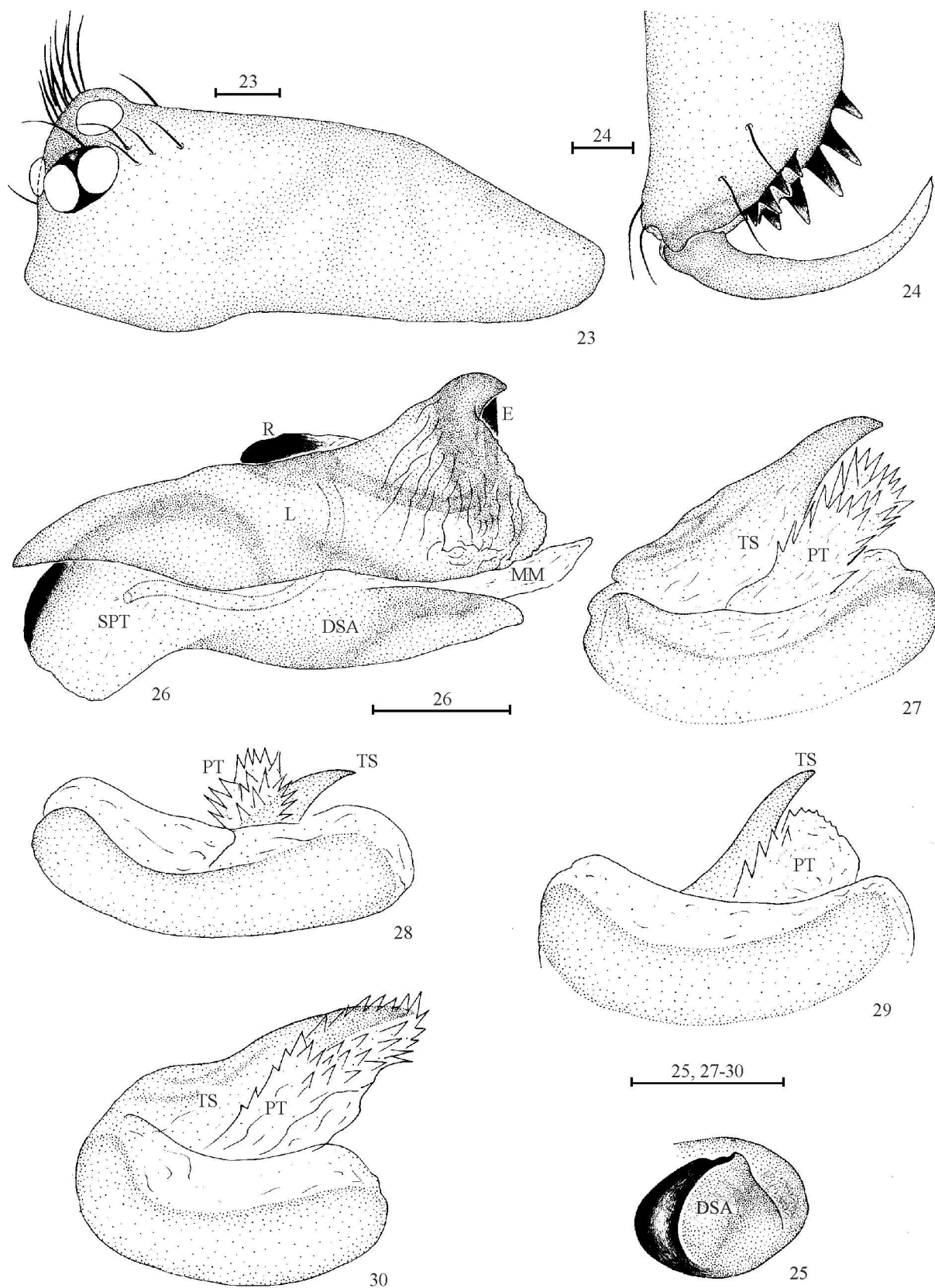
Gonyglidium rugulosa **sp. nov.** (Figs 18–39)

Typematerial. Holotype male (IZCAS), Yigong State Geological Park (30.10°N, 95.07°E; alt. 2069 m), Tangnai Town, Boni County, Tibet, China, collected by LIN Yu-Cheng, 30 Aug. 2005. Paratypes: 5 females (IZCAS), same data as holotype; 8 males and 13 females (IZCAS), Pêlung Town (30.04°N, 95.01°E; alt. 2115 m), Nyingchi County, Tibet, China, collected by LIN Yu-Cheng, 31 Aug. – 2 Sep. 2005.

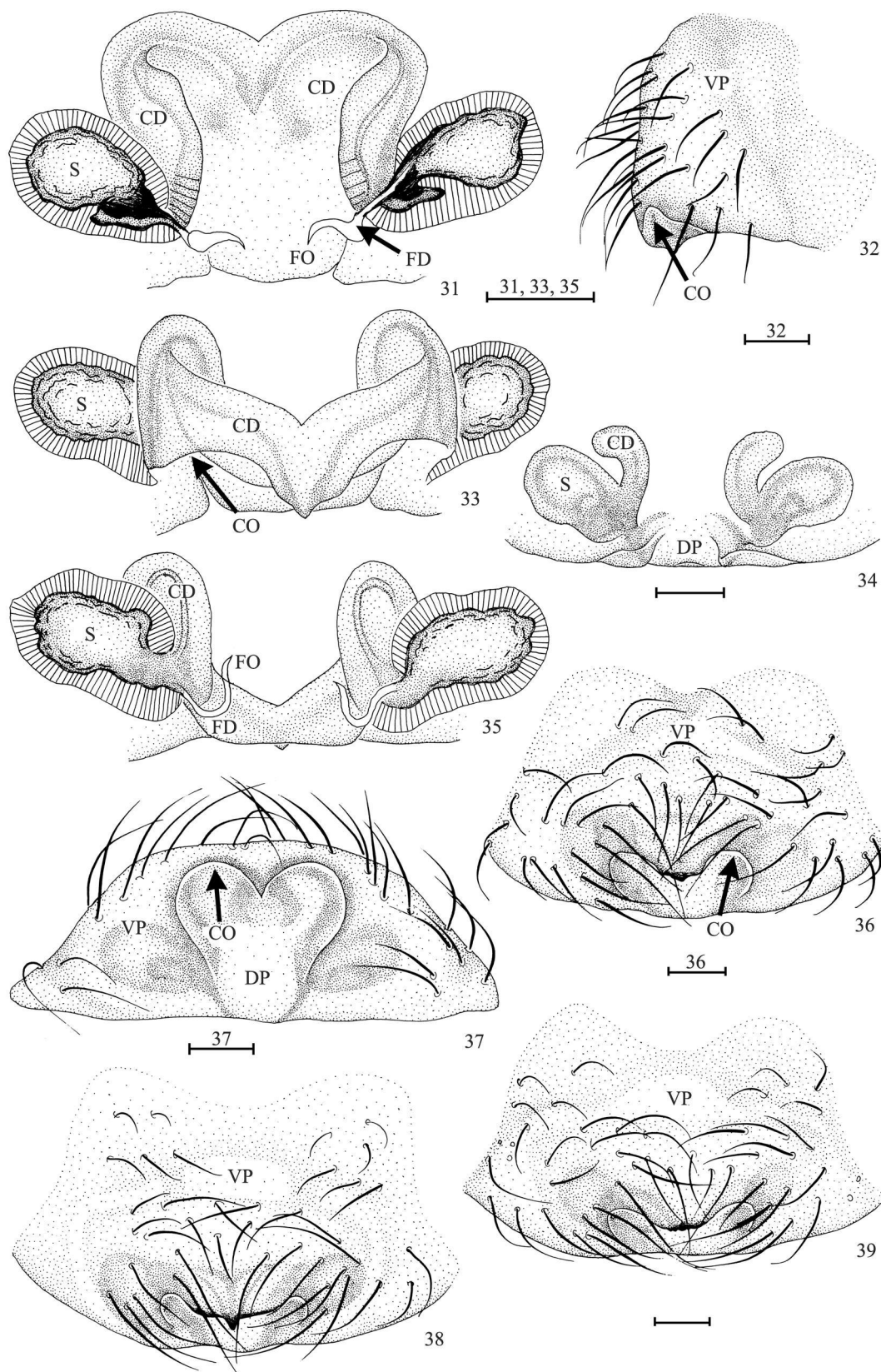
Diagnosis. This new species is similar to *Gonyglidium rufipes* (Linnaeus, 1758), but male can be distinguished by the lamella (Fig. 26), which is wide, long, covered with wrinkles on the outer surface, but short, small, smooth in *G. rufipes*, and the presence of



Figs 18–22 *Gangylilium rugulosa* sp. nov. 18 Left male palpus proteral view. 19 Same, retrolateral view. 20 Tibia of left male palpus proteral view. 21 Tibia of left male palpus dorsal view. 22 Left male palpus ventral view. Drawings based on holotype. Scale bar= 0.1 mm.



Figs 23– 30 *Gangylidium ngubsa* sp. nov. 23 Male carapace lateral view. 24 Left male chelicera posterior view. 25 Distal suprategular apophysis ventral view. 26 Embolic division (with suprategulum), ventral view. 27– 30 Tegular sac and protegulum of left male palpus ventral view. Drawings based on holotype (23– 27) and paratypes (28– 30). 27– 30 Show variation in shape and arrangement of tegular sac and protegulum. Scale bars 23= 0.1 mm, 24– 30= 0.05 mm.



Figs 31- 39. *Gongylidium rugulosa* sp. nov. 31. Female vulva, anterior view. 32. Epigynum, lateral view. 33. Female vulva, ventral view. 34. Epigynum, dorsal view. 35. Female vulva, dorsal view. 36. Epigynum, ventral view. 37. Same, posterior view. 38- 39. Epigynum, ventral view. Drawings based on paratypes 36. 38- 39. Show variation in the shape of posterior margin of female ventral plate. Scale bars= 0.05 mm.

triangular membranous apophyses on the protegulum (Fig 27), but smooth in *G. rufipes*. Female can be distinguished by the fertilization duct which is directed anteriorly (Fig 35) but mesally in *G. rufipes*, and the capsule which has an n-shaped lamella (Fig 35) near spermatheca but none in *G. rufipes*.

Description of holotype Total length 1.78. Carapace 0.83 long 0.70 wide slightly raised in PME ocular area (Fig 23). Clypeus 0.16 high. Abdomen dark grey. AME diameter 0.06, ALE 0.07, PME 0.08, PLE 0.08, AME interdistance 0.28 times their diameter, AME-ALE interdistance 0.18 times ALE diameter, PME interdistance 0.52 times their diameter, PME-PLE interdistance 0.37 times PLE diameter. Stemum 0.50 long 0.51 wide. Coxa IV interdistance 1.13 times their width. Chelicera with 6 promarginal and 4 retromarginal teeth (Fig 24). Tibia of leg I 8.43 times longer than deep. Tm I 0.51, Tm IV present. Dorsal spines on tibiae of legs I – IV: 2-2-1-1; dorsal spine on patellae of legs I – IV: 1-1-1-1. Leg measurements I 3.01 (0.86, 0.23, 0.74, 0.70, 0.49); II 2.84 (0.81, 0.23, 0.69, 0.66, 0.46); III 2.41 (0.68, 0.22, 0.56, 0.57, 0.39); IV 3.16 (0.89, 0.22, 0.83, 0.78, 0.44).

Palp Femur even and straight. Patella swollen, short. Tibia swollen, extended distally into several apophyses, retrolaterally into one wide flat rectangular apophysis and one dentate strongly curved inside apophysis (Fig 19); dorsally into one strong apophysis with the outer margin arched in retrolateral view (Fig 19); prolaterally into two triangular apophyses fused basally, with 1 hair on the tip respectively (Fig 20). Tibia with one prolateral and two retrolateral trichobothria (Fig 21). Paracymbium strongly curved and hooked downwards distally, with 3 long hairs ventrally (Fig 19). Protegulum distinctly developed, covered with triangular apophyses more or less parallel with the tagular sac which is wide and membranous basally and slightly sclerotized towards the tip (Fig 27). Supratégulum extended distally into a blunt apophysis with a deep groove retrolaterally (Fig 25). Lamella with the posterior part moderately long and wide (Fig 18); the anterior part distinctly wide basally, pointed at the end, covered with long or short wrinkles on the outer surface (Figs 18, 26). Median membrane small barely visible in unexpanded palp (Fig 26). Embolus moderately long (Fig 18).

Description of female (paratype) (from Yigong State Geological Park). Total length 2.2. Carapace 0.94 long 0.73 wide unmodified similar to that of male in coloration. Clypeus 0.16 high. AME diameter 0.06, ALE 0.09, PME 0.07, PLE 0.08, AME interdistance 0.35 times their diameter, AME-ALE

interdistance 0.25 times ALE diameter, PME interdistance 0.65 times their diameter, PME-PLE interdistance 0.54 times PLE diameter. Stemum 0.56 long 0.54 wide. Coxa IV interdistance 1.19 times their width. Chelicera with 5 promarginal and 5 retromarginal teeth. Tibia of leg I 6.81 times longer than deep. Tm I 0.53, Tm IV present. Dorsal spines on tibiae of legs I – IV: 2-2-1-1; dorsal spine on patellae of legs I – IV: 1-1-1-1. Leg measurements I 2.87 (0.83, 0.25, 0.68, 0.65, 0.46); II 2.74 (0.78, 0.24, 0.64, 0.63, 0.45); III 2.33 (0.64, 0.24, 0.52, 0.56, 0.38); IV 3.11 (0.88, 0.24, 0.80, 0.76, 0.44).

Epigynum dark brown, prominent in lateral view (Fig 32). The posterior margin of the ventral plate slightly sclerotized to a relatively small extension (Fig 36). Dorsal plate partially covered by the ventral plate in ventral view and heart-shaped in posterior view (Fig 37). Spermathecae ellipsoidal (Figs 31, 35). Copulatory openings arched at the junction of the dorsal plate and ventral plate (Fig 37). Copulatory ducts enclosed in a sclerotized capsule, fused at the beginning wide V-shaped (Fig 33) and bearing a 180° turn before connecting to spermathecae (Fig 35). Fertilization ducts slim, mesally originated but directed anteriorly (Fig 35).

Etymology The specific name is from Latin adjective “*nugulosus*” = “bearing lots of wrinkles”, and refers to the characteristics of lamella of the embolic division of male palp.

Variation Nine males and 18 females were measured. Total length varies from 1.72 – 1.88 in males, 1.84 – 2.20 in females. Carapace length is 0.80 – 0.84 in males, 0.81 – 0.94 in females, width 0.69 – 0.71 in males, 0.66 – 0.73 in females. The species shows considerable intraspecific variations in shape and arrangement of protegulum and tagular sac of the male palp (Figs 27 – 30), and shape of posterior margin of epigynum (Figs 36, 38 – 39).

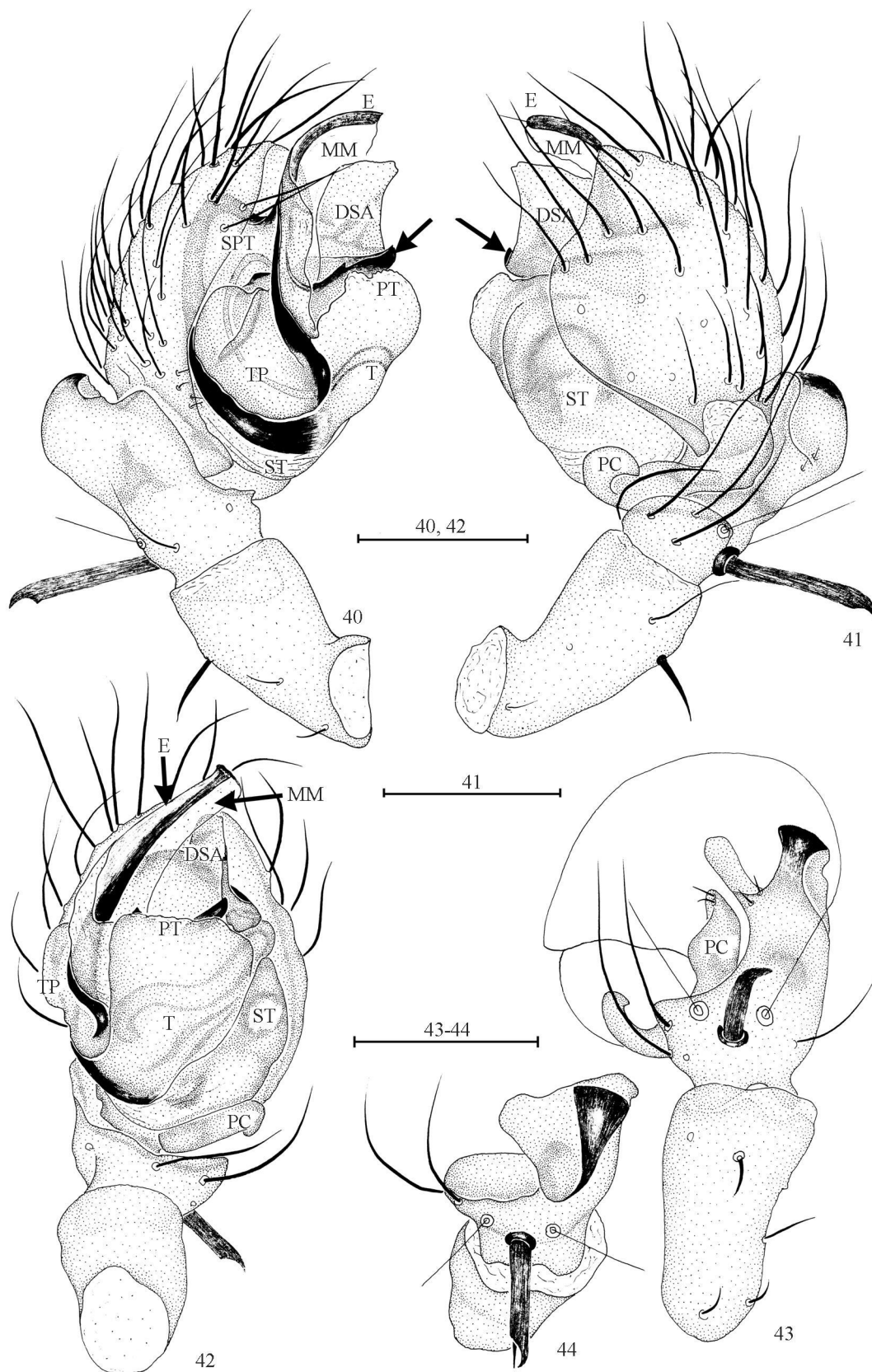
Distribution Bomi and Nyingchi County in Tibet.

Habitat The spiders were found among the grass or under stones.

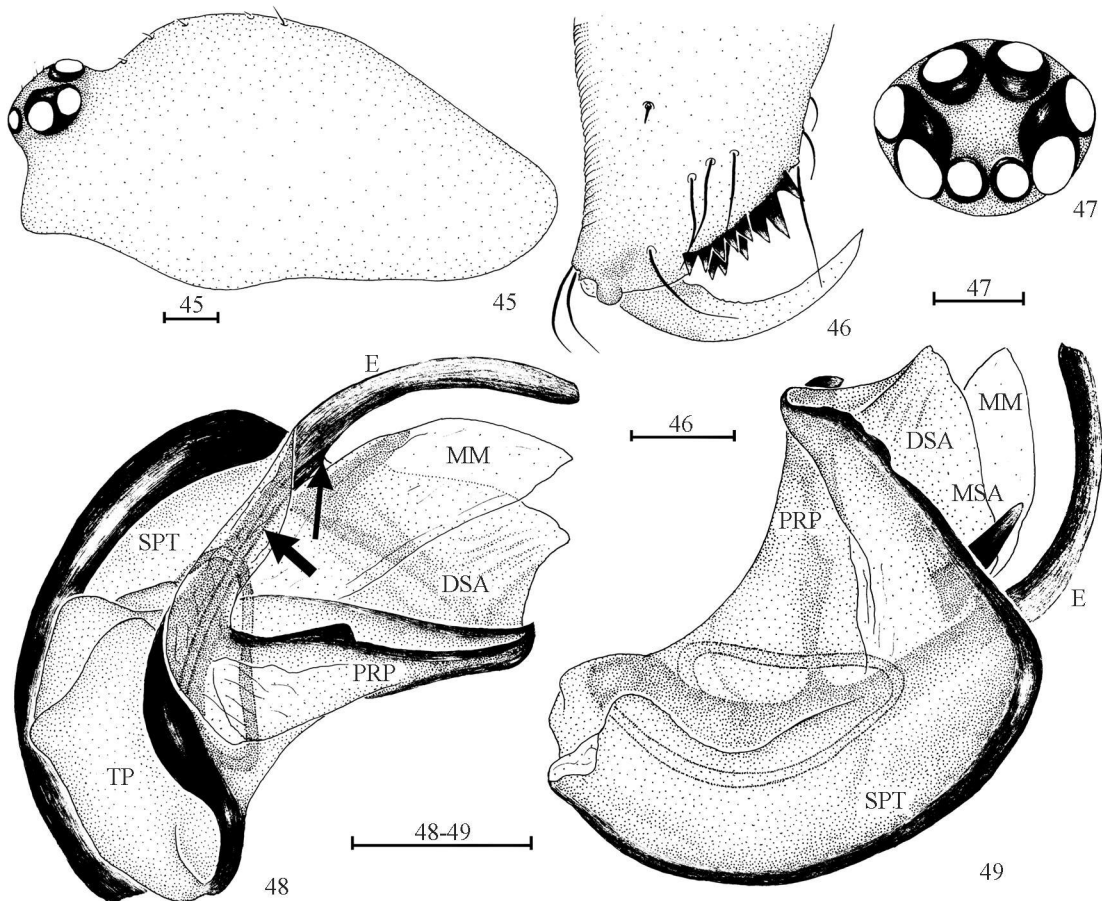
Oia breviproscissa **sp. nov.** (Figs 40–56)

Type material Holotype male (IZCAS), Baotianman Nature Reserve (33.50°N, 111.93°E; alt 1487 m), Naxiang County, Nanyang City, Henan Province, China, collected by WANG Qian and LN Yur-Cheng 11 Nov. 2005. Paratypes 6 males and 7 females (IZCAS), same data as for holotype.

Diagnosis Male of the new species can be easily distinguished from *Oia inadatei* (Oj 1964) and *Oia sororia* Wunderlich, 1973 by the short palpal tibial apophysis (Fig 43) which is long and thin in *O. inadatei*.



Figs 40–44 *Oia braviprocessa* sp. nov. 40 Left male palpus, proteral view. 41 Samec retro-lateral view. 42 Samec ventral view. 43 Samec dorsal view. 44 Tibia and patella of left male palpus, anterior view. Drawings based on holotype. Scale bars = 0.1 mm.

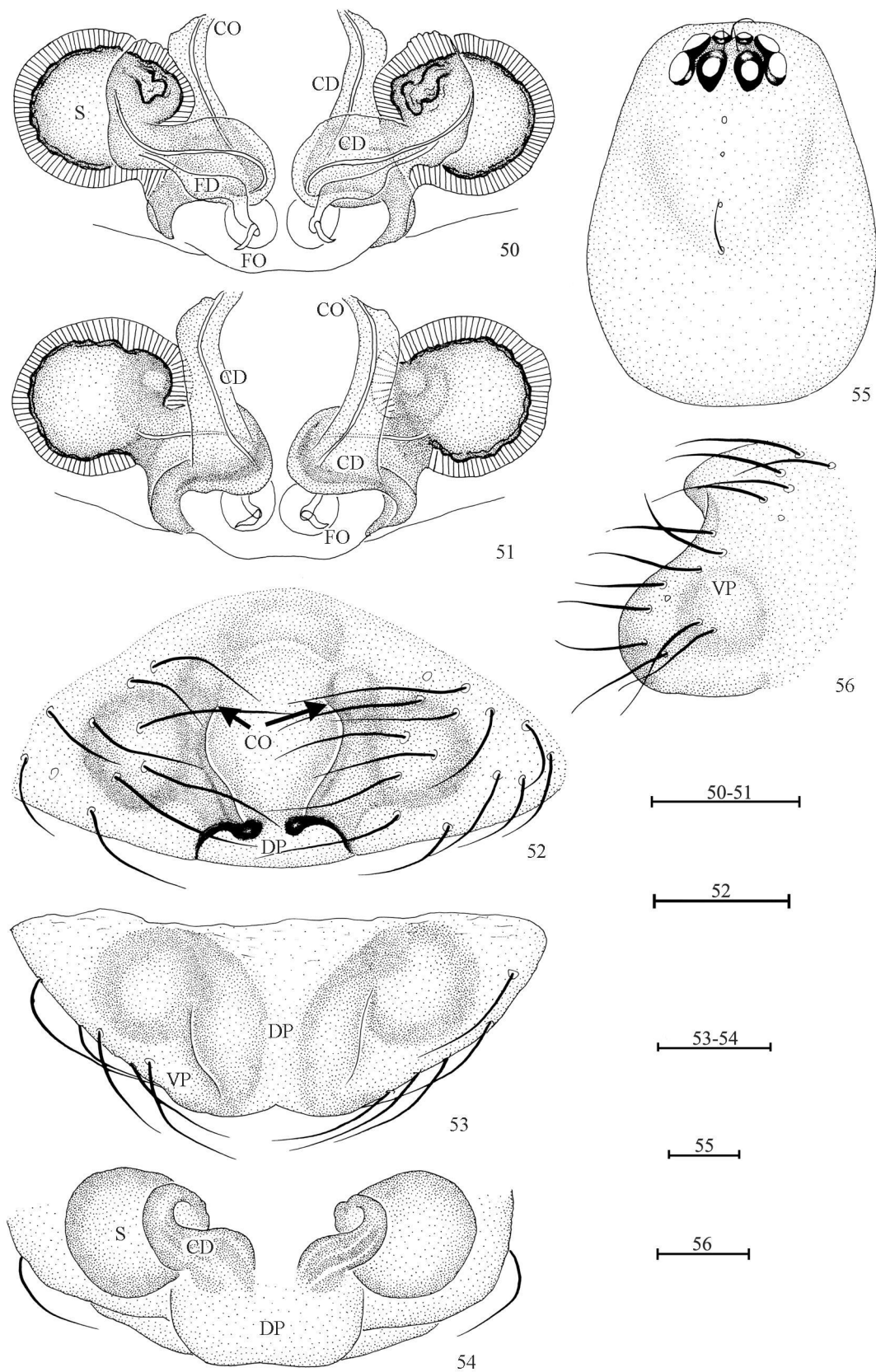


Figs 45– 49. *Oia breviproscissa* sp. nov. 45 Male carapace lateral view. 46 Left male chelicera posterior view. 47. Ocular area anterior view. 48 Embolic division (with suprategulum), ventral view (regular arrow indicates the opening of ejaculatory duct, bold arrow indicates well developed column). 49 Same, dorsal view. Drawings based on holotype. Scale bars= 0.05 mm.

and long and wide in *O. sororia*. Female can be easily distinguished from *O. inadatei* and *O. sororia* by the path of copulatory ducts of vulva (Figs 50– 51).

Description of holotype. Total length 1.13. Carapace 0.48 long 0.43 wide, orange, strongly hunched (Fig 45). Clypeus 0.09 high. Abdomen light grey. Ocular area distinctly elevated, with all eyes arranged in a circle around the base of the elevation (Fig 47). AME diameter 0.02, ALE 0.04, PME 0.03, PLE 0.04. AME interdistance 0.29 times their diameter; AME-ALE interdistance 0.14 times ALE diameter; PME interdistance 0.5 times their diameter; PME-PLE interdistance 0.17 times PLE diameter. Sternum 0.34 long 0.32 wide. Coxa IV interdistance 1.31 times their width. Chelicera with 6 promarginal and 5 retromarginal teeth (Fig 46). Tibia of leg I 4.45 times longer than deep. Tm I 0.45, Tm IV absent. Dorsal spine on tibiae of legs I – IV: absent; dorsal spine on patellae of legs I – IV: 1-1-1-1. Leg measurements I 1.33 (0.41, 0.14, 0.31, 0.24, 0.23); II 1.17 (0.34, 0.14, 0.27, 0.22, 0.20); III 1.02 (0.29, 0.14, 0.20, 0.20, 0.19); IV 1.34 (0.41, 0.14, 0.33, 0.24, 0.23).

Palp. Femur even and straight. Patella half as long as femur, with a spine dorsally (Fig 41). Tibia short, with one long brownish black spine dorsally (Fig 41) and one bifurcated apophysis which is composed of a brownish black, thick, small triangular branch and a yellowish brown, thin, large triangular branch in anterior view (Fig 44); with one prolateral and one retrolateral trichobothrium (Fig 44). Paracymbium moderately long and distinctly curved, hooked distally (Fig 41). Tegulum situated distal to subtegulum in unexpanded palp (Fig 41). Protegulum flat and wide, covering part of the embolic division (Fig 42). Suprategulum extended into a tapering marginal apophysis and a triangular distal apophysis which is almost transparent and can be easily confused with median membrane (Figs 48 – 49). Embolic division complicated, embolus long ribbon-shaped, the ejaculatory duct opens from the distal half of embolus (Fig 48); posterior radical process tapered, with a groove in the center (Fig 48); column well-developed, covering the proximal half of embolus in prolateral view (Fig 48); median membrane wide basally and then gradually narrowed



Figs 50-56 *Oia brevirostris* sp. nov. 50. Female vulva, dorsal view. 51. Same, ventral view. 52. Epigynum, ventral view. 53. Same, posterior view. 54. Same, dorsal view. 55. Female carapace, dorsal view. 56. Epigynum, lateral view. Drawings based on paratype. Scale bars = 0.05 mm.

(Fig. 48); tailpiece large and fragile with a narrow piece extended upwards (Fig. 40).

Description of female (paratype). Total length 1.11. Carapace 0.52 long 0.41 wide unmodified (Fig. 55), similar to that of male in coloration. Clypeus 0.08 high. Ocular area unmodified. AME diameter 0.02, ALE 0.05, PME 0.04, PLE 0.04, AME interdistance 0.29 times their diameter, AME-ALE interdistance 0.2 times ALE diameter, PME interdistance 0.54 times their diameter, PME-PLE interdistance 0.38 times PLE diameter. Stemum 0.33 long 0.28 wide. Coxa IV interdistance 1.29 times their width. Chelicera with 6 promarginal and 5 retromarginal teeth. Tibia of leg I 3.90 times longer than deep. Tm I 0.45, Tm IV absent. Dorsal spine on tibiae of legs I – IV: absent; dorsal spine on patellae of legs I – IV: 1-1-1-1. Leg measurements: I 1.13 (0.36 0.15 0.24 0.19 0.18); II 1.07 (0.34 0.15 0.23 0.18 0.18); III 0.92 (0.28 0.14 0.18 0.16 0.16); IV 1.20 (0.37 0.15 0.28 0.21 0.19).

Epigynum fairly prominent in lateral view (Fig. 56). Ventral plate depressed in the centre (Fig. 52). Dorsal plate partly visible almost 2.5 times wider than long in ventral view (Fig. 52). Spermathecae rounded separated by their width (Fig. 54). Copulatory ducts (Figs 50–51) enclosed in a capsule relatively narrow and slightly curved inward then becoming wider and appearing spindly in posterior

view, looped once before connecting to spermathecae. Fertilization ducts moderately long mesally originated but directed posteriorly (Fig. 50).

Etymology. The specific name is from Latin adjective “*brevi*” = “short”, and “*processus*” = “apophysis”, and refers to the short palpal tibial apophysis.

Variation. 7 males and 7 females were measured. Total length varies from 1.06–1.16 in males, 1.06–1.16 in females. Carapace length is 0.46–0.51 in males, 0.51–0.53 in females, width 0.39–0.43 in males, 0.39–0.41 in females.

Distribution. Baotianman Nature Reserve in the Henan Province.

Habitat. The spiders were found under leaf litter in broadleaf forest.

REFERENCES

- Homiga, G. 2000. Higher level phylogenetics of erigonine spiders (Araneae, Linyphiidae, Erigoninae). *Smithsonian Contributions to Zoology*, 609: 1–160.
- Platnick, N. I. 2010. The world spider catalog, version 11.0. American Museum of Natural History online at <http://research.amnh.org/entomology/spiders/catalog/index.html> (accessed 16 June 2010).
- Tanasevich, A. V. 2006. On some Linyphiidae of China mainly from Taibai Shan, Qinling Mountains, Shaanxi Province (Arachnida, Araneae). *Zootaxa*, 1325: 277–311.
- Wunderlich, J. 1973. Linyphiidae aus Nepal. Die neuen Gattungen *Heterolinyphia*, *Martinsius*, *Oia* und *Paragongylidium* (Arachnida, Araneae). *Sankenberg Biology*, 54: 429–443.

中国微蛛亚科三新纪录属三新种记述 (蜘蛛目, 皿蛛科)

宋妍婧 李枢强*

中国科学院动物研究所 北京 100101

摘要 记述中国微蛛亚科 3 新纪录属 3 新种: 巨突蛛属 *Diplocephabiles* Oj 1960, 钩状巨突蛛 *D. unatus* sp. nov.; 圆膝蛛属 *Gongylidium* Menge, 1868, 皱褶圆膝蛛 *G. rugulosa* sp. nov. 和良次蛛属 *Oia* Wunderlich, 1973, 端突良次蛛 *O. breviprocessia* sp. nov. 模式标本均保存于中国科学院动物研究所, 北京。

1 钩状巨突蛛, 新种 *Diplocephaloides unatus* sp. nov. (图 1–17)

新种雄性触肢胫节节后侧突的端部明显钩状, 前盾片扁平且中间凹陷, 外雌器前端另具 1 个深棕色的 “w” 形小突起, 故易与 *Diplocephabiles sagamus* (Bösenberg & Strand, 1906) 相区别。

正模 ♂, 浙江省奉化市锦屏街道上宋村龙岙山山脚 (29.65°N, 121.40°E), 2006-10-15 宋裕定、印秀萍采集。副模: 6 ♂♂, 6 ♀♀, 数据同正模。

2 皱褶圆膝蛛, 新种 *Gongylidium rugulosa* sp. nov. (图 18–39)

新种相似于 *Gongylidium rufipes* (Linnaeus, 1758), 两者主

关键词 种内变异, 触肢器, 外雌器。

中图分类号 Q969.226

要区别为: 新种雄性触肢顶板端部比后者宽; 新种雄性触肢前盾片外表面具大量膜质三角形突; 新种外雌器受精管虽中间起源, 但最终朝前方延伸, 而后者朝中间延伸; 新种外雌器纳精囊附近的骨匣呈 “n” 形, 而后者无。

正模 ♂, 西藏波密县通麦镇易贡国家地质公园门口 (30.10°N, 95.07°E; 海拔 2 069 m), 2005-08-30 林玉成采集。副模: 5 ♀♀, 数据同正模。副模: 8 ♂♂, 13 ♀♀, 西藏林芝县排龙乡 (30.04°N, 95.01°E; 海拔 2 115 m), 2005-08-31–2008-09-02 林玉成采集。

3 短突良次蛛, 新种 *Oia breviprocessia* sp. nov. (图 40–56)

新种相似于该属的另外 2 个种: *Oia inadatei* (Oj 1964) 和 *Oia sororia* Wunderlich, 1973。但是新种雄性触肢胫节突短而钝, *Oia inadatei* (Oj 1964) 的胫节突长而细, *O. sororia* 的长而宽; 埋有交媾管的骨匣的形态也完全不同于上述两种。

正模 ♂, 河南省南阳市内乡县宝天曼自然保护区 (33.50°N, 111.93°E; 海拔 1 487 m), 2005-11-11, 王倩、林玉成采集; 副模: 6 ♂♂, 7 ♀♀, 数据同正模。

* 通讯作者。